



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Date: April 7, 2005
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In re application of: **Hideki Tai, et al**

Serial No.: **09/713,929**

Filed: **November 16, 2000**

Docket No.: **JP919990195**

Board of Patent Appeals and Interferences
Alexandria, VA 22313-1450

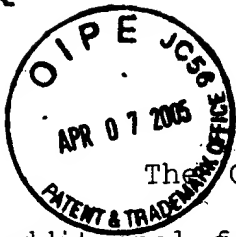
TRANSMITTAL OF APPEAL BRIEF UNDER 37 CFR 41.37

Sir:

Transmitted herewith is an Appeal Brief with respect to the Notice of Appeal filed February 7, 2005 for the above-identified patent application.

This Appeal Brief is being filed on behalf of other than a small entity.

Authorization is given to charge amount of \$500.00, for filing a Brief in support of appeal in accordance with 37 CFR 41.20(b), to Deposit Account 50-0510.



The Commissioner is hereby authorized to charge any required additional fee deemed necessary to perfect the filing of this document and to charge back any overpayment to Deposit Account No. 50-0510. This transmittal letter is intended to take the effect of any petition deemed necessary to perfect filing of the accompanying document.

Respectfully submitted,
Hideki Tai, et al

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I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS
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BOARD OF PATENT APPEALS AND INTERFERENCES

<u>In Re Application of</u>	:	April 7, 2005
<u>Hideki Tai, et al</u>	:	Group Art No.: 2143
<u>Serial No. 09/713,929</u>	:	Examiner: B. Summons
<u>Filed: November 16, 2000</u>	:	IBM Corporation Anne Vachon Dougherty 3173 Cedar Road Yorktown Hts, N.Y. 10598
<u>Title: APPARATUS AND METHOD FOR MANAGING MOBILE AGENTS</u>	:	

Board of Patent Appeals and Interferences
Alexandria, Virginia 22313-1450

APPEAL BRIEF (37 CFR 41.37)

Appellants hereby appeal to the Board of Patent Appeals and Interferences from the decision dated October 5, 2004 of the Examiner finally rejecting Claims 1, 3-6 and 8-9 in the above application, and respectfully request that the Board of Patent Appeals and Interferences consider the arguments presented herein and reverse the Examiner's rejection.

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I. REAL PARTY IN INTEREST

The appeal is made on behalf of Appellants who are real parties in interest with respect to the subject patent application.

II. RELATED APPEALS AND INTERFERENCES

There are no pending related appeals or interferences with respect to the subject patent application.

III. STATUS OF CLAIMS

There are seven (7) claims pending in the subject patent application, numbered 1, 3-6, and 8-9. No claims stand allowed. All of Claims 1, 3-6 and 8-9 stand rejected and are the subject of this appeal.

A complete copy of the claims involved in the appeal is attached hereto.

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IV. STATUS OF AMENDMENTS

The status of the prosecution of the application is as follows:

March 19, 2004	-	Office Action.
June 21, 2004	-	Amendment
October 5, 2004	-	Final Office Action
February 7, 2005	-	Notice of Appeal filed

No amendments have been filed subsequent to final rejection.

V. SUMMARY OF INVENTION

The subject invention comprises apparatus and a method for managing mobile agents wherein, with reference to the drawings, agent servers, 1242-1244 as shown in Fig. 12, maintain not only the history of movements, at 1246 and as further detailed in Fig. 18, of mobile agents at their locations but also keep a count, shown in Fig. 16, of the accumulated total of movements by each of the mobile servers for which the agent servers have a history. In addition, the agent servers maintain requests, shown at request sending buffer 1351 of Fig. 13, for updating registration

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server locations, 1352 of Fig. 13, and periodically communicate the requests to the registration server, wherein the requests include the history of movements with the accumulated counts. At the registration server, tables, as detailed in Fig. 17, are updated for any given mobile agent using only the information that is accompanied by the highest count of accumulated movements, thereby avoiding updating with stale information.

VI. STATEMENT OF ISSUES OF APPEAL

The grounds of rejection to be reviewed on appeal is as follows:

"Claims 1, 3-6, and 8-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Robertson et al (US 2002/0178026)".

VII. ARGUMENT

The Robertson patent publication is directed to a dynamic service architecture that is not domain-bound. Robertson provides method and apparatus for implementing a global lookup for global services in that service architecture. Entity servers, 2902A and 2902B of Fig. 29 including databases 2904A and 2906A for server 2902A and server 2904B and 2906B for server 2902B, maintain global services which can be accessed by clients. In the Robertson system, each local domain includes a registrar that maintains tables of local services, manages an enterprise lease for each local service, and passes proxies for locally running services to requesting clients (see: paragraphs [0262-0272]). The registrar may initialize a counter which counts down to a lease expiration event [0270] for each running service. In addition, the architecture includes an enterprise repository which lists all running services in the enterprise [0272]. If a client cannot find a service through the registrar at the local domain, then the client can consult the enterprise repository to locate the service and perform a "non-local hop" to access the service via the respective non-local registrar and proxies.

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Applicants respectfully assert that the Robertson patent publication does not teach or suggest the invention as claimed. The Robertson system maintains a repository of enterprise services, which may include a count of the total number of services; however, maintaining a count of the number of running services in an enterprise server architecture is not the same as or suggestive of counting the number of accumulated movements of mobile agents. Further, the Robertson maintenance of a counter for counting down the time until lease expiration for a running service is not the same as or suggestive of counting the number of accumulated movements of mobile agents. What is taught and claimed by the present invention is a mobile agent management apparatus and a method for managing locations of mobile agents whereby a history of movements for each of the mobile agents is maintained and a count of movements for the mobile agents is accumulated. Clearly the Robertson service repository and lease expiration countdown are not the same as or suggestive of the claimed history of movements with counts.

The Examiner has cited the Robertson monitoring of lease duration against the language of independent Claims 1 and 6, in paragraph 1 with respect to Claim 1 and paragraph

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5 with respect to Claim 6. As discussed above, monitoring a time duration for a service lease is clearly not the same as or suggestive of accumulating a count of movements of a mobile agent.

In addition, when rejecting the language of independent Claims 1 and 6 in paragraph 1 at the bottom of page 5 as well as in paragraph 5 on page 7, the Examiner has cited "life cycle of cached instances as they move in and out of cache, [0295]". The Examiner has not, however, applied those teachings in any way to the claim language. Appellants respectfully assert that the life cycle of a cached instance does not anticipate means for maintaining a history of movements of a mobile agent including a counter for accumulating a count of the accumulated number of movements for the mobile agent.

Finally, with regard to the language of independent Claims 1 and 6, the Examiner has cited "updating the enterprise repository with registration information, [0266]" against the claimed request means and step for periodically generating requests for updating location information, including the accumulated number of movements for the mobile agent. The registration information maintained by the enterprise repository of Robertson is information about

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running services. The cited registration information is not the same as or suggestive of updated location information including an accumulated number of movements for a mobile agent.

It is well established under U. S. Patent Law that, for a reference to anticipate claim language under 35 USC 102(e), that reference must teach each and every claim feature. Since the Robertson publication does not teach maintaining a history of movements for each mobile agent, wherein the history includes a count of the accumulated movements of the mobile agent, and periodically providing requests for updating which include that count information, it cannot be maintained that the Robertson publication anticipates the invention as claimed by independent Claims 1 and 6. Moreover, a reference which does not anticipate the language of the independent claims clearly cannot be held to anticipate the language of claims which depend therefrom and add limitations thereto. Accordingly, Appellants conclude that the Robertson reference also does not anticipate the invention as claimed by dependent Claims 3-5 and 8-9.

With specific reference to the language of the dependent claims, Appellants respectfully contend that Robertson does not teach or suggest the claim features of

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comparing accumulated counts of movements to a threshold (Claims 3-6 and 8-9) or of updating only with information which includes a higher accumulated count (Claims 4, 5, and 9). With regard to Claims 3-4 and 8-9, the Examiner has cited the Robertson teachings from paragraph [0270] relating to the counting, or countdown, to a lease expiration event for a service in the global system. However, the claim language expressly recites comparing a count of accumulated numbers of movements of a mobile agent to a threshold. Counting and/or comparing a lease expiration time for a running service is clearly not the same as counting and comparing counts of movements of mobile agents. The Examiner has further stated that "[a] threshold number of services may be defined for a container and, whenever the number of services being run exceeds the threshold, the container service simply de-lists itself until some services' leases expire". Appellants contend that counting the number of running services and comparing that number to a threshold is not the same as or suggestive of a generating a request to a registration server for updating location information when a count of the accumulated number of movements of a mobile agent exceeds a predetermined threshold.

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With regard to Claim 5, the Examiner has cited the Robertson teachings related to updating the enterprise repository with registration information [0266] and incrementing an update counter [0349]. Appellants respectfully assert that updating registration information in an enterprise repository for running services is not the same as or suggestive of maintaining and updating at least one register with the history of movements of mobile agents including the accumulated number of movements and locations of each of the mobile agents upon receipt of requests for updating generated by agent servers based on a comparison to a predetermined threshold. Similarly, the incrementing of an update counter to track registration information updates does not anticipate the claimed maintaining and updating of a history of movements of a mobile agent upon receipt of requests for updating location information associated with a higher accumulated number of movements for a given mobile agent.

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CONCLUSION

Appellants respectfully assert that the Examiner has erred in rejecting Claims 1, 3-6 and 8-9 as anticipated by the Robertson patent publication. Appellants believe that the Examiner has erred in interpreting the teachings of the Robertson patent publication, that the Examiner has erred in applying the Robertson teachings to the claim language, and that the Robertson publication's teachings do not anticipate each and every claim feature.

In light of the foregoing arguments, Appellants request that the decision of the Examiner, rejecting all of the pending claims, be overturned by the Board and that the claims be passed to issuance.

Respectfully submitted,
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By:


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APPENDIX OF CLAIMS

1. A mobile agent management apparatus comprising:
a plurality of agent servers; and
a registration server for maintaining location information of mobile agents,

wherein each of said plurality of agent servers comprises:

means for maintaining history of movement of each of said mobile agents including a counter for accumulating a count of the accumulated number of movements for each of said mobile agents; and

request means for periodically generating requests for updating location information of each of said agents, said requests including at least a mobile agent identifier and said accumulated number of movements for said mobile agent, to renew location information at said registration server.

3. The apparatus of Claim 1 wherein each of said agent servers further comprises comparator means for comparing the count in said counter with a predetermined threshold.

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4. The apparatus of Claim 1 wherein the request generator of each of said agent servers generates a request to said registration server for updating location information when the count of the accumulated number of movements of a corresponding mobile agent exceeds a ~~the~~ predetermined threshold.

5. The apparatus of Claim 4 wherein said registration server comprises at least one register for maintaining accumulated number of movements and locations of each of said mobile agents in an associated manner and renews said location information of each of said mobile agents only upon receipt of requests for updating location information associated with a higher accumulated number of movements.

6. A method for managing locations of mobile agents by using a plurality of agent servers and a registration server for maintaining locations of mobile agents comprising the steps of:

an each of said agent servers;

maintaining history of movement of each of said mobile agents including accumulating a count of the number of movements for each of said mobile agents; and

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periodically generating requests for updating and deleting registries, said requests including at least a mobile agent identifier and said count of the accumulated number of movements for said mobile agent,; and

at said registration server, renewing location information of each of said mobile agents kept by said registration server with said requests.

8. The method of Claim 6 further comprising comparing said count of the accumulated number of movements to a threshold number of movements.

9. The method of Claim 8 wherein said generating is done when said count of the accumulated number of movements exceeds said threshold number of movements.